

engineering standards have changed. Functionally obsolete bridges restrict the efficient use of the system because they act as bottlenecks.

The North Carolina DOT's Bridge Maintenance Unit, with assistance from various consultants, inspects all bridges on the State Highway System. All bridges in the Whiteville/Brunswick Urban Area have been analyzed, rated, appraised, and inventoried, and the resulting data has been reduced to a more readily useable form as a management tool. A sufficiency index number has been calculated for each bridge to establish eligibility and priority for replacement. The bridges with the highest priority are replaced as Federal-Aid funds and State funds are made available.

The sufficiency rating is a method of evaluating deficiency factors that determine whether a bridge is sufficient to remain in service. The result of this method is a percentage in which 100 percent represents an entirely sufficient bridge and zero percent represents an entirely insufficient or deficient bridge. A sufficiency rating of 50 percent or less qualifies for Federal Bridge Replacement Funds.

The Whiteville/Brunswick Urban Area has only three deficient bridges below the sufficiency rating of 50%. They cross Cedar Branch and Pine Log Branch. The bridge located on SR 1429 (Slippery Log Road) is the most insufficient of the three bridges. The bridge sufficiency chart is below, also see Figure #4. Bridge #151 and Bridge #361 are included in the 1997-2003 Transportation Improvement Program under project B-3146 & B-3147, respectively.

Table 3 - Bridge Sufficiency Chart				
Bridge #	Type	Percent Rating	Location	Stream Crossing
148	SD	24.6	SR 1437	Pine Log Swamp
151	FO	49.9	SR 1429	Cedar Branch
361	SD	35.8	SR 1554	Pine Log Swamp

SD = Structurally Deficient

FO = Functionally Obsolete

ENVIRONMENTAL CONCERNS

Thoroughfare Planning is the planning of highway systems. It is also the initial stage of a road being constructed. Environmental factors have been a consideration in planning by North Carolina since 1959. The environmental factors are (1) physical environment; (2) social and cultural environment; and (3) economic environment. See Table 4 below. Although all of these factors were addressed in the study, only some of the factors will be discussed here.